account of the changes found both in the cells and fibre tracts and in the vessels of the cord on examination by recent staining methods. They suggest that the disease may have been the result of an infection from the uterus, as the patient had had for some time an unhealthy condition of the endometrium, and had been subjected to the operation of curettage about a month before the onset of the myelitis.

ALLEN.

235. PATHOGÉNIE DE LA RIGIDITÉ MUSCULAIRE ET DA LA CONTRACTURE DANS LES AFFECTIONS ORGANIQUES DU SYSTÈME NERVEUX (Pathogenesis of Muscular Rigidity and Contractures in Organic Disorders of the Nervous System). A. Van Gehuchten (La France Méd., 44, 1897, p. 629).

The physiological mechanism of muscular rigidity and contraction, which are constant symptoms in organic hemiplegia and spasmodic paraplegia, are discussed by the author. The theories advocated by Follin, Hitzig, Straus, Marie, Freud, Jackson and others, according to which these phenomena are of muscular, spinal or cerebellar origin, prove to be inadequate in explaining the clinical and anatomical facts. Besides, it would be difficult to find a solution applicable to both hemiplegic and spasmodic contractures, the underlying cause not necessarily being the same. The author maintains that spasmodic contraction is an active process, that is, an exaggeration of normal muscular tonus, of *cerebral* origin, due to interruption in the course of the cortico-spinal fibres, with preservation of corto-ponto-cerebello-spinal nerves, which latter keep the cells of the spinal cord under the control of the motor cells of the cortex. On the other hand, hemiplegic contracture has quite a different genesis, the influence of the cerebral cortex upon the motor spinal cells and the corresponding paralysed muscles being cut off by the lesions, and if contractures develop in this case, they are of peripheral origin, due to a difference in degree of paralysis between the flexor and extensor muscles. The former are usually less involved than the latter, therefore the frequency of post-hemiplegic flexion contractures. If, on the other hand, the paralysis is of equal intensity in all the muscles of the extremity, no contractions will result, and there will be a flaccid condition.

MACALESTER.

236. DES PARALYSIES POST-ANESTHÉSIQUES (Post-Anæsthetic Paralysis). Ed. Schwartz (Gazette des Hopitaux, 70, 1897, p. 1,248).

Following operations performed under general anæsthesia there are sometimes observed paralyses which have no pathological connection with the seat of operation, and surprise both patient and surgeon by their unexpected appearance. The following belongs to this class of cases:

A man, æt. 45, was operated on for a small inguinal hernia. During the operation, which was performed under chloroform anæsthesia, there was a slight attack of cardiac and respiratory syncope, which was easily and promptly overcome by artificial respiration. On emerging from the chloroform narcosis the patient observed a feeling of formication in the right hand, especially in the thumb and index finger, and he could not readily move the two affected fingers. The next day there was a complete paralysis of the flexor longus pollicis and the flexors of the index finger. All the other muscles of the upper extremity were intact. There was no anæsthesia or hyperæsthesia. When he tried to move his lower limbs there was observed a well-defined paralysis of the right quadriceps extensor femoris. The paralysis was thus limited to the right side, involving a single muscle below and two above. These symptoms gradually disappeared under massage and electricity, and at the expiration of seven months there was complete cessation of the paralysis.

When the paralysis of the thumb and index finger was observed the first impression was that the case was one of peripheral paralysis due to stretching of the brachial plexus, and yet there had been no violence used in applying artificial respiration, which had lasted barely two minutes. Moreover, it was no longer possible to consider this origin of the trouble after the development of the quadriceps extensor paralysis, which could only be assigned to a central origin, functional or otherwise. Upon carefully questioning the patient, it was learned that for some time he had noticed a little clumsiness in using his right hand, and that in writing it had become necessary for him to use a thicker penholder. This fact strengthened the assumption of a central paralysis. The possibility of hysteria in this case could be ignored.

Post-anæsthetic paralyses, as they are usually classified, show two distinct types. Sometimes they are true peripheral paralyses, especially of the brachial plexus and its branches, occurring thus more commonly in the upper extremity. These cases have been observed by many surgeons, and present the clinical features described by Erb, involving usually the deltoid, brachialis anticus, biceps and supinator longus. More rarely other muscles are paralyzed. These cases are true traumatic paralyses, caused by compression or stretching in long-continued or strained faulty positions, or to the circular compression of limbs by tight elastic bands. They may, and should, be avoided by carefully watching the patient during the administration of chloroform or ether. This first class of cases then is not true postanæsthetic paralysis, if this term is intended to have any etiological significance, for they have no other relation to the anæsthesia than to appear consecutive to it, and to have been produced by a vicious attitude during the continuance of the narcosis.

Much more rare and much less studied is another class of cases, which cannot be explained in the same manner, and which presents a different clinical picture. Without being committed to any particular theory as to their nature, they may be called, as the writers who have studied them have done, true postanæsthetic or central paralyses. The case here reported is such a one, and there have been collected in all ten cases, the clinical appearances of which are variable, but which may be arranged in three classes:

1. Cases in which the paralysis is limited to a single limb, monoplegias resembling the cases described by Büdinger and Franke, the first, with autopsy, showing a zone of softening in the cerebral cortex, the second occurring in a hysterical woman with the symptoms of hysterical paralysis.
2. Cases in which are observed paralyses of a cranial nerve (the facial) alone or associated with paralysis of the limbs or of other cranial nerves.
3. Cases in which true hemiplegia occurs, either observed immediately upon emerging from the sleep of anæsthesia, or developing a short time after.

The pathological question which is presented is difficult of solution. Is there here a toxic paralysis, as believe Büdinger and Burnheim, comparable to alcoholic paralyses, and depending on a special action of chloroform, causing a degeneration of nerve tissue when the latter constitutes a *locus minoris resistentiae?* Such would not seem to be the case owing to the rarity of its occurrence, and to the fact that it is observed in cases where the anæsthesia has been of very short duration or incomplete. May it be accounted for as a simple coincidence? It is possible, but not demonstrable. On the other hand, it may well be believed that where endarteritis exists that patients with diseased arteries may during the period of excitement, while crying out, struggling or vomiting, rupture a vessel and present variable symptoms, depending upon the site and extent of the lesion. The cases of Depoge, Gross and Büdinger harmonize with this view. Finally, hysteria may account for a certain number of these cases, and in the present day it may be well to explore this field further.

From the practical standpoint it is impossible to foresee its occurrence, but it may be suspected where arterial or cardiac disease is present. Recovery often takes place when there is not total hemiplegia.

SHIVELY.

237. VON DER VERWACHSUNG ODER STEIFIGKEIT DER WIRBELSÄULE (Concerning Ankylosis or Rigidity of the Spinal Column). W. v. Bechterew (Deutsche Zeitschrift für Nervenheilkunde, 11, 1897, p. 327).

In a previous communication v. Bechterew described an affection consisting of (1) immobility or rigidity of a part or the whole of the spinal column, without distinct tenderness on percussion or on bending the body; (2) of kyphosis, especially in the upper thoracic region, causing the head to project forward; (3) of paresis of the muscles of the trunk, neck and extremities, with unimportant atrophy of the muscles of the back and scapulæ; (4) of diminished sensation, especially in the areas of the cutaneous branches of the thoracic, lower cervical, and sometimes of the lumbar nerves; (5) of irritation symptoms (paræsthesia, pain) in the distribution of these nerves; (6) occasionally of spasmodic twitching or contracture (irritation of motor nerves) of the muscles in the extremities; (7) of reaction of degeneration in advanced cases.

On account of the paresis of the muscles the erect position of the head is rendered difficult. The breathing is abdominal. Heredity and trauma seem to play a rôle, at times, in the development of the disease. The affection is progressive, and is little known. The "arthritis deformans of the vertebral column," described by Oppenheim, does not correspond in every respect with the rigidity of the vertebral column described by v. Bechterew. A new case of this uncommon affection is described at length.

As yet no necropsies have been obtained, but it is probable that the vertebræ become united, that the spinal nerves are thereby compressed, and that the inflammation extends to the spinal dura.

SPILLER.

238. BEMERKUNG ÜBER DIE CHRONISCHE ANKYLOSIRENDE ENTZÜNDUNG DER WIRBELSÄULE UND DER HÜFTGELENKE (Remarks on the Chronic Inflammation of the Vertebral Column and Hip Joints). A. Strümpell (Deutsche Zeitschrift für Nervenheilkunde, 11, 1897, p. 338).

The above paper by v. Bechterew has called forth the statement from Strümpell that he has been acquainted for a long time with this peculiar form of chronic arthritis, which affects the vertebral column and hip joints, and causes complete ankylosis of these parts. He publishes the third case of this peculiar disease observed by him. He is somewhat in doubt as to whether the disease which he describes is exactly the same as v. Bechterew's affection or Oppenheim's "arthritis deformans of the vertebral column."

SPILLER.